

# Doctoral Dissertation Presentation

## 学位論文発表会

Different shoot and root responses to low phosphorus availability in Japanese cultivars of maize and soybean

(日本のトウモロコシとダイズの品種における地上部と根部の異なる低リン応答性)

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**1<sup>st</sup> of December 2023 (Friday) 14:00 – 15:00**  
**Venue C301 Lecture Room**

Low phosphorus (P) availability in agricultural soils severely impacts crop productivity worldwide. Over-applicating P fertilizers is not a viable solution to overcome P deficiency because such P is a non-renewable resource. Plants have evolved morphological, physiological, and biochemical responses to P deficiency. However, these morphological, physiological, and biochemical responses to P deficiency are species - and genotype - specific. Therefore, assessing the genotypic variability of crop genotypes under low P conditions and developing P-efficient crop genotypes are crucial to keeping the momentum of sustainable agriculture. Therefore, this study evaluated Japanese core collections of maize (86 cultivars) and soybean (94 cultivars) to low P under hydroponic conditions, and ten cultivars of each species were selected for further assessment under soil conditions.

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\* 本発表会は共同セミナーの対象となります